

Silicon PNP Power Transistors

2SB1018

DESCRIPTION

- With TO-220F package
- High collector current
- Low collector saturation voltage
- Complement to type 2SD1411

APPLICATIONS

- Power amplifier applications
- High current switching applications

PINNING

PIN	DESCRIPTION
1	Emitter
2	Collector
3	Base

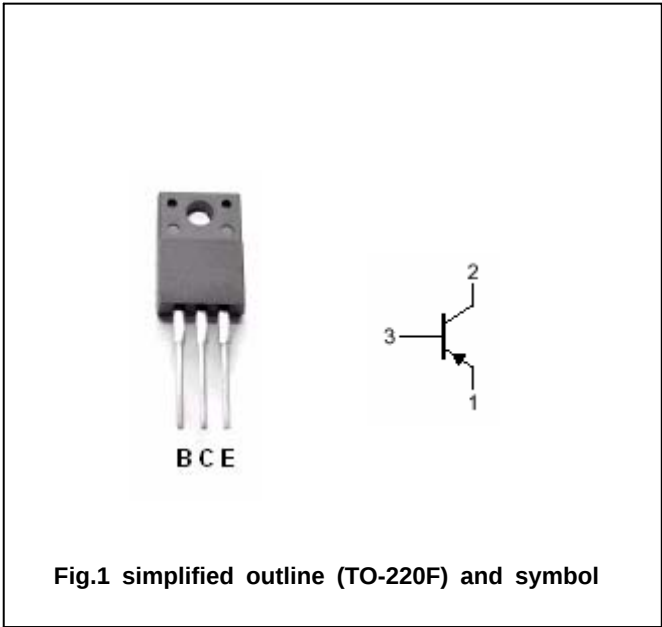


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings(Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-100	V
V_{CEO}	Collector -emitter voltage	Open base	-80	V
V_{EBO}	Emitter-base voltage	Open collector	-5	V
I_C	Collector current		-7	A
I_B	Base current		-1	A
P_C	Collector power dissipation	$T_C=25$	30	W
		$T_a=25$	2	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

Silicon PNP Power Transistors

2SB1018

CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdownvoltage	$I_C=-50mA; I_B=0$	-80			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=-4A; I_B=-0.4A$		-0.3	-0.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=-4A; I_B=-0.4A$		-0.9	-1.4	V
I_{CBO}	Collector cut-off current	$V_{CB}=-100V; I_E=0$			-5	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=-5V; I_C=0$			-5	μA
h_{FE-1}	DC current gain	$I_C=-1A; V_{CE}=-1V$	70		240	
h_{FE-2}	DC current gain	$I_C=-4A; V_{CE}=-1V$	30			
f_T	Transition frequency	$V_{CE}=-4V; I_C=-1A$		10		MHz
C_{OB}	Collector output capacitance	$f=1MHz; V_{CB}=-10V; I_E=0$		250		pF

Switching times

t_{on}	Turn-on time	$I_{B1}=-I_{B2}=-0.3A$ $V_{CC}=30V, R_L=10\Omega$		0.4		μs
t_{stg}	Storage time			2.5		μs
t_f	Fall time			0.5		μs

◆ h_{FE-1} Classifications

O	Y
70-140	120-240

Silicon PNP Power Transistors

2SB1018

PACKAGE OUTLINE

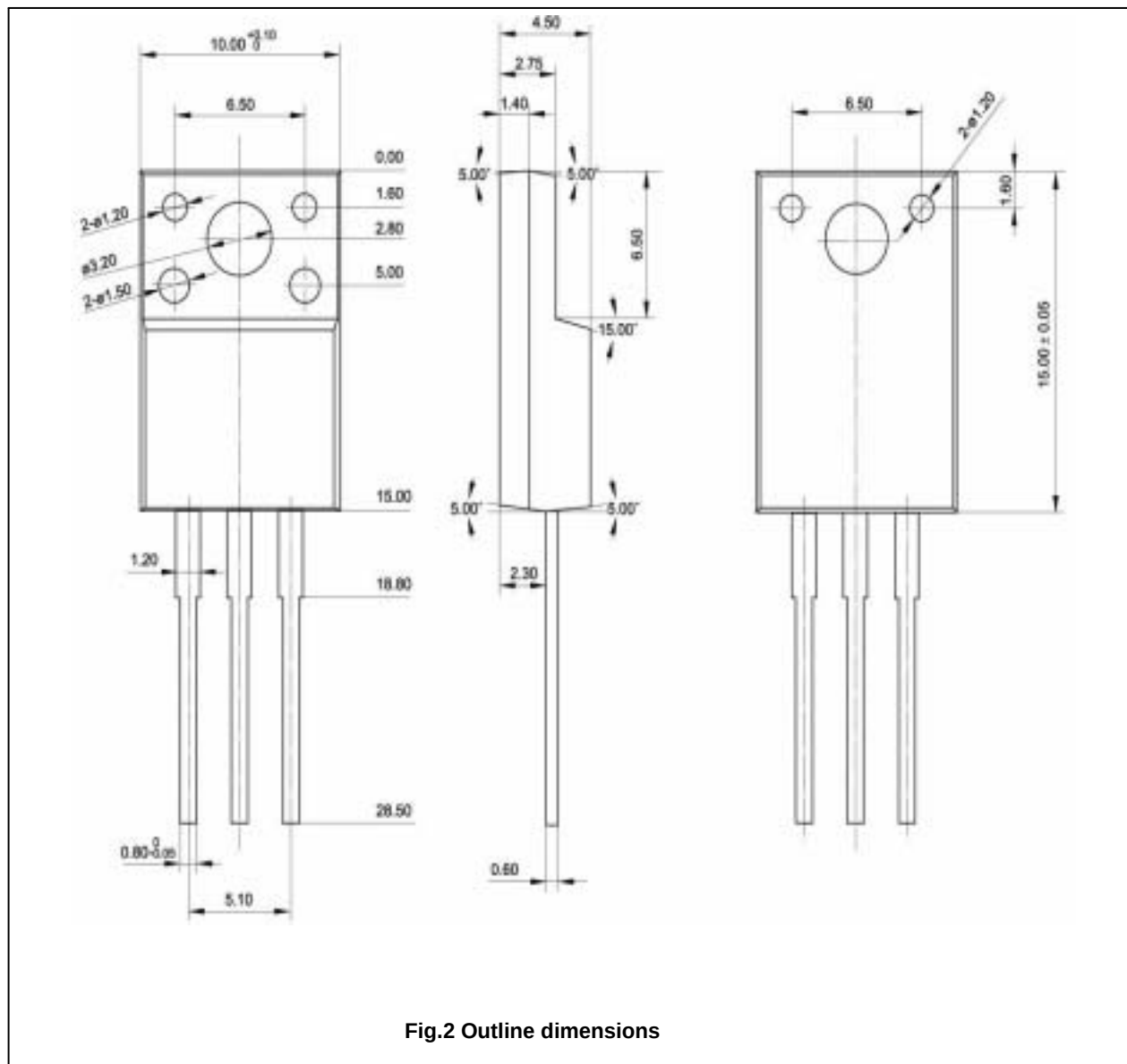


Fig.2 Outline dimensions

Silicon PNP Power Transistors

2SB1018

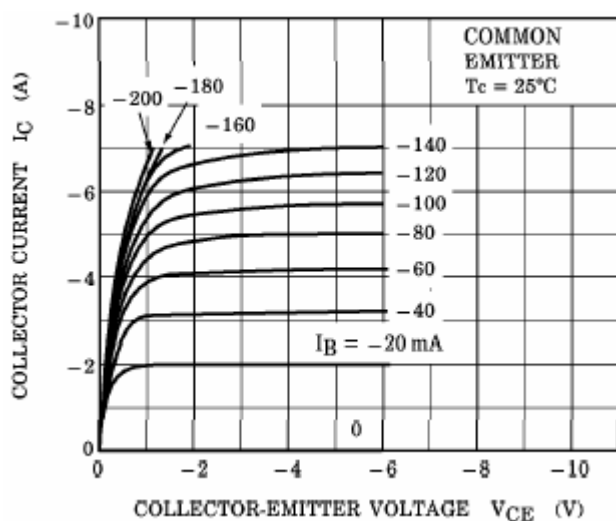


Fig.3 Static Characteristic

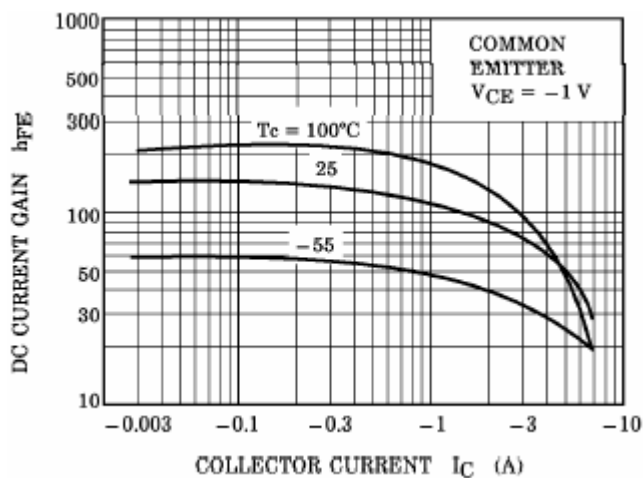


Fig.4 DC current Gain

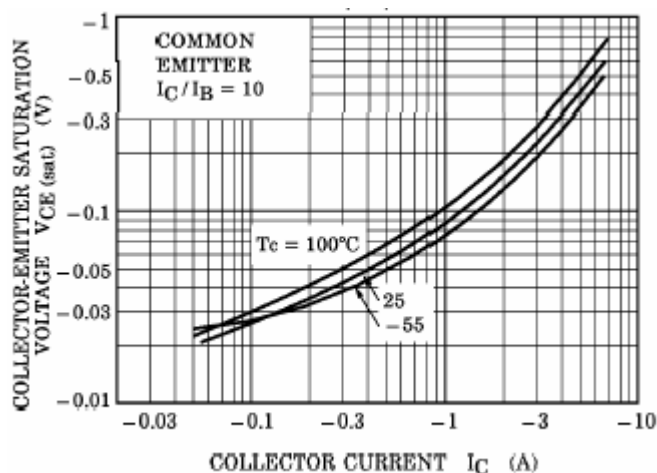


Fig.5 Collector-Emitter Saturation Voltage

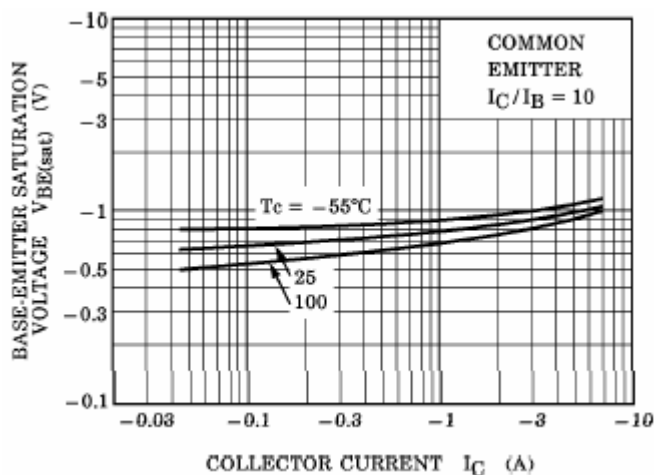


Fig.6 Base-Emitter Saturation Voltage

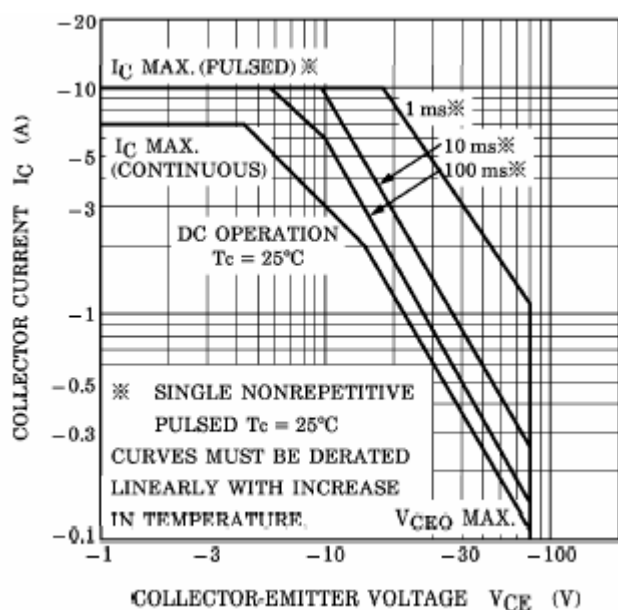


Fig.7 Safe Operating Area